


STUDY LINKS AIR POLLUTION TO COVID-19 CASES AND DEATHS

Relevant for: Environment | Topic: Environmental Pollution - Air, Water, Soil & E-waste

Cause of concern: Rising pollution load is a catalyst in aggravating COVID-19 cases, the study showed. 

A first-of-its-kind pan India study says Mumbai and Pune are among hotspots where high air pollution from the transport and industrial sectors is related to a higher number of COVID-19 cases and deaths.

The study is titled 'Establishing a link between fine particulate matter (PM2.5) zones and COVID-19 over India based on anthropogenic emission sources and air quality data'. The study was conducted by Dr. Saroj Kumar Sahu and Poonam Mangaraj from Utkal University, Bhubaneswar; Gufran Beig, senior scientist, and Suvarna Tikle, scientist, Indian Institute of Tropical Meteorology-Pune; Bishma Tyagi, National Institute of Technology, Rourkela; and V. Vinoj, Indian Institute of Technology, Bhubaneswar.

In the study, COVID-19 cases were observed from March to November 2020, while national PM2.5 emissions load was estimated from the base year 2019. Of 16 cities across 36 States, Mumbai and Pune were evaluated in Maharashtra. "Our findings suggest a significant correlation between district level air pollution data and COVID-19 cases. We found that regions using huge amounts of fossil fuels such as petrol, diesel and coal by combustion in transport and industrial activities also experience a far higher number of COVID-19 cases," said Dr. Sahu, adding, "Maharashtra recorded the second highest emission load in India — 828.3 gigagram per year (Gg/Yr) of PM2.5 — based on the National Emission Inventory developed by us. Uttar Pradesh had the highest."

Among the 16 cities captured in the study, Mumbai and Pune recorded the third- and fourth-highest number of "bad air quality days", respectively. Delhi and Ahmedabad stood first and second, respectively.

"Through our analysis, it has become clear that the rising pollution load is a catalyst in aggravating COVID-19 cases," Dr. Sahu said.

He added that polluted hotspots are also triggering long-term effects, and more studies are needed to understand this better.

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